NON-PUBLIC?: N
ACCESSION #: 8902210346
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Maine Yankee Atomic Power Company PAGE: 1 OF 2

DOCKET NUMBER: 05000309

TITLE: Plant trip on Loss of EHC Control Power
EVENT DATE: 01/10/89 LER #: 89-001-00 REPORT DATE: 02/09/89

OPERATING MODE: 7 POWER LEVEL: 100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR SECTION
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:
NAME: Scott McAllister TELEPHONE: 207-882-6321

COMPONENT FAILURE DESCRIPTION:
CAUSE: SYSTEM: COMPONENT: MANUFACTURER:
REPORTABLE TO NPRDS:

SUPPLEMENTAL REPORT EXPECTED: NO

ABSTRACT:

At 2019 on January 10, 1989, the reactor automatically tripped from 100% power on loss of load due to a turbine trip. The turbine tripped due to a spurious low voltage condition on a control power bus for the Electro-Hydraulic Control (EHC) system.

The EHC system positions the turbine control valves. Control power for EHC is provided from five DC power busses. Loss of voltage on any one of these busses actuates a relay that trips the main turbine.

A Westinghouse technical representative (the EHC system vendor) physically inspected the power distribution panel and electronically tested the system. The system was found functioning properly. The root cause of the spurious loss of voltage could not be identified.

As a precautionary measure, several potentially suspect electronic components were replaced. A temporary strip chart recorder was connected to three of the busses to assist further troubleshooting efforts in the event of a repeat occurrence. The other two busses are not externally accessible for recording.

END OF ABSTRACT

TEXT PAGE 2 OF 2

At 2019 on January 10, 1989, the reactor (RCT) automatically tripped from 100% power on loss of load due to a turbine (TRB) trip. The turbine tripped due to a spurious low voltage condition on a control power bus for the Electro-Hydraulic Control (EHC)(JJ)(TG) system.

Emergency Core Cooling (BQ)(BP)(BE) was not required and did not initiate. Emergency Feedwater (BA) automatically initiated, as expected following a trip from full power. No Technical Specification limits or safety limits were exceeded. Pressurizer (PZR) power operated relief and code safety valves (RV) were not challenged. Steam generator code safety valves (RV) were not challenged.

The EHC system positions the turbine control valves (ISV)(PCV). Control power for EHC is provided from five DC power busses (BU), +48 Volt, +15 Volt, -15 Volt, +5.5 Volt and -6 Volt. Loss of voltage on any one of these busses actuates a relay (RLY) that trips the main turbine.

The +48 V, +15 V, and -15 V busses each have two independent power supplies (JX), one from in house electrical distribution, and one from the permanent magnet generator (PMG) on the main turbine-generator unit. The power supplies are continuously paralleled onto the busses to Prevent a turbine trip from a single power supply failure. The +5.5 V and -6 V busses are powered from single power supplies.

All the power supplies were found in operation after the trip. The Loss of EHC Control Power first out annunciator (ANN), indicating the cause of the trip, was successfully reset. A technical representative from the EHC system vendor, Westinghouse, physically verified all components and connections associated with the power distribution panel were in satisfactory condition. During electronic testing, the system functioned properly. The root cause of the spurious loss of voltage could not be identified.

As a precautionary measure, several potentially suspect electronic components were replaced. A temporary strip chart recorder was connected to the +48 V, +15 V and -15 V busses to assist further troubleshooting efforts in the event of a repeat occurrence. The +5.5 V and -6 V busses are not externally accessible for recording.

ATTACHMENT 1 TO 8902210346 PAGE 1 OF 1

MaineYankee

RELIABLE ELECTRICITY FOR MAINE SINCE 1972

EDISON DRIVE AUGUSTA, MAINE 04330 (207) 622-4868

10 CFR 50.731
February 9, 1989
MN-89-14 GDW-89-45

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

References: (a) License No. DPR-36 (Docket No. 50-309)

Subject: Maine Yankee Licensee Event Report 89-001-00 - Plant Trip on Loss of EMC Control Power

Gentlemen:

Please find enclosed Maine Yankee Licensee Event Report 89-001-00. This report is submitted in accordance with the requirements of 10 CFR 50.73(a)(2)(iv).

Very truly yours,

MAINE YANKEE
G. D. Whittier, Manager
Nuclear Engineering and Licensing

GDW/bjp

Enclosed

cc: Mr. Richard H. Wessman
Mr. William T. Russell
Mr. Pat Sears
Mr. Cornelius F. Holden
American Nuclear Insurers

1010L-RCC

*** END OF DOCUMENT ***